What is claimed is:

1. A cloning system comprising:

   (a) a first arm having a first selectable marker and a first cyclization element; and

   (b) a second arm having a second selectable marker and a second cyclization element,

   wherein at least one arm further comprises an origin of replication.

2. The cloning system of claim 1, wherein each arm further comprises a rare restriction endonuclease recognition site.

3. The cloning system of claim 1, wherein each arm further comprises a polylinker.

4. The cloning system of claim 1, wherein said first cyclization element is a nucleic acid comprising a first LOX site, and said second cyclization element is a nucleic acid comprising a second LOX site.

5. The cloning system of claim 1 wherein:

   (a) the first arm further comprises a first nucleic acid homologous to the 5' terminus of a target nucleic acid; and

   (b) the second arm further comprises a second nucleic acid homologous to the 3' terminus of the target nucleic acid.

6. A composition comprising said cloning system of claim 1 and a target sequence.

7. The composition of claim 6, wherein said target sequence is a nucleic acid of a virus.

8. The composition of claim 7, wherein said virus is a DNA virus.

9. The composition of claim 8, wherein said DNA virus is selected from the group consisting of adenovirus, adeno-associated virus, pox virus, papova virus and herpesvirus.

10. The composition of claim 7, wherein said virus is an RNA virus.

11. The composition of claim 10, wherein said RNA virus is a retrovirus.

12. The composition of claim 11, wherein said retrovirus is a lentivirus.

13. The composition of claim 12, wherein said lentivirus is human immunodeficiency virus.

14. A vector comprising:

(a) a yeast selectable marker;

(b) a bacterial selectable marker;

(c) a telomere;

(d) a centromere;

(e) a bacterial replication element;

(f) a yeast replication element; and

(g) at least one rare restriction endonuclease recognition site.

15. The vector according to claim 14, comprising at least one unique restriction endonuclease recognition site.

16. The vector according to claim 14, comprising a polylinker.

17. The vector of claim 14, comprising a first nucleic acid homologous to the 5' terminus of a target nucleic acid, and a second nucleic acid homologous to the 3' terminus of said target nucleic acid.

18. The vector of claim 14, further comprising a target nucleic acid.

19. The vector of claim 18, wherein said target nucleic acid is a nucleic acid sequence of a virus.

SUB B3 20. A eukaryotic host cell comprising said cloning system of claim 1.

21. The eukaryotic host cell of claim 20, wherein said eukaryotic host cell is a yeast cell.

36. The method of claim 35, wherein at least one arm further comprises an origin of replication.

37. The method of claim 35, wherein each arm further comprises a rare restriction endonuclease recognition site.

38. The method of claim 35, wherein said first cyclization element is a nucleic acid comprising a first LoxP site, and the second cyclization element is a nucleic acid comprising a second LoxP site.

39. The method of claim 35, wherein homologous recombination occurs in a yeast cell.

40. The method of claim 35, further comprising the step of circularizing said vector containing said target nucleic acid.

41. The method of claim 38, wherein said vector is circularized by contacting said first and said second LoxP sites with Cre, thereby producing a circularized recombinant vector by site-specific recombination.

42. The method of claim 38, wherein said vector is circularized in bacteria.

43. The method of claim 35, further comprising introducing said vector containing said target nucleic acid in a bacterium to propagate said vector.

44. A method of producing a recombinant nucleic acid comprising:

(a) contacting:

(i) a target nucleic acid; and

(ii) a vector comprising in operable linkage:

(1) a yeast selectable marker;

(2) a bacterial selectable marker;

(3) a telomere:

(4) a centromere;

(5) a yeast replication element;

(6) a bacterial replication element;

22. The eukaryotic host cell of claim 21, wherein said yeast cell is Saccharomyces cerevisiae.

23. A cell comprising the vector of claim 14.

24. The cell of claim 23, which is a eukaryotic cell.

25. The cell of claim 24, wherein said eukaryotic cell is a yeast cell.

26. The cell of claim 25, wherein said yeast cell is Saccharomyces cerevisiae.

27. A cell comprising the composition of claim 6.

28. The cell of claim 27 which is a eukaryotic cell.

29. The cell of claim 28, wherein said eukaryotic cell is a yeast cell.

30. The cell of claim 29, wherein said yeast cell is Saccharomyces cerevisiae.

31. The cell of claim 27 which is a bacterium.

32. A bacterial cell comprising the composition of claim 7.

33. A cell comprising the vector of claim 1 or 18.

34. The cell of claim 33 which is a bacterium.

35. A method of producing a vector containing a target nucleic acid, comprising the step of contacting under conditions which allow homologous recombination:

(a) a target nucleic acid;

(b) a first arm comprising a nucleic acid homologous to the 5' terminus of said target nucleic acid, a first selectable marker and a first cyclization element; and

(c) a second arm comprising a second nucleic acid homologous to the 3' terminus sequence of said target nucleic acid, a second selectable marker, and a second cyclization element,

wherein homologous recombination of (a), (b) and (c) produces said vector containing said target nucleic acid.

(7) a nucleic acid homologous to the 5' terminus of said target nucleic acid;

(8) a nucleic acid homologous to the 3' terminus of said target nucleic acid; and

(9) at least one rare restriction endonuclease recognition site;

in a yeast cell wherein homologous recombination of (i) and (ii) produces said recombinant nucleic acid;

(b) isolating said recombinant nucleic acid from said yeast cell; and

(c) introducing said recombinant nucleic acid into a bacterium, wherein said recombinant nucleic acid is amplified in said bacterium.

45. The method of claim 44, wherein said yeast is Saccharomyces cerevisiae.

46. The method of claim 44, wherein said bacterium is Escherichia coli.

47. The method of claim 44, wherein said target nucleic acid comprises a virus nucleic acid.